UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,904	11/21/2003	Andrew C. Bartlett	MWS-053	4048

959 7590 04/16/2007

LAHIVE & COCKFIELD, LLP
ONE POST OFFICE SQUARE
BOSTON, MA 02109-2127

EXAMINER	
KANG, INSUN	
ART UNIT	**PAPER NUMBER**
2193	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/719,904	BARTLETT, ANDREW C.	
	Examiner	Art Unit	
	Insun Kang	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/1/2005, 3/26/2004, and 11/21/2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responding to application papers dated 2/1/2005, 3/26/2004, and 11/21/2003.

2. Claims 1-37 are pending in the application.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 1 recites the limitation "the second mode" in line 7. There is insufficient antecedent basis for this limitation in the claim. In line 7, the attribute is interpreted as: the at least one attribute.

Per claims 13, 23, and 27: in line 8, "the attribute" in claim 13 (line 8), 23 (line 8), and 27 (line 8) is interpreted as: the at least one attribute.

As per claims 2-12, 14-22, 24-26, and 28, these claims are rejected for dependency on the above rejected parent claims.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-37 are rejected under 35 U.S.C. 102(b) as being anticipated by The MathWorks ("Simulink," 2001) hereafter MathWorks.

Per claim 1:

MathWorks discloses:

- locking at least one attribute of a signal provided from a first node to a second node (i.e. page 9-149, Latch input field traps the data(signal) path to maintain the data unchanged, see "If enabled, the port *outputs the value of its input at the previous time step*")
- providing a latch component between the first node and the second node; and setting the latch component to a first mode in which the latch component automatically determines and locks the at least one attribute of the signal on an occurrence of a triggering event, the first mode changing to the second mode, wherein in the second mode, the attribute of the signal are locked to be prevented from changing when the design of the system changes (i.e. ***Latch input field***, "This field is enabled only if the Inport block resides in a triggered subsystem. If enabled, the *port outputs the value of its input at the previous time step* (page 9-149)," which explains that Latch input field traps the data (signal) path to maintain the data unchanged; The Latch component encloses signal attributes between ports in a triggered system, see page 9-148, Parameters and

Dialog Box; Once enabled, the Latch function is performed to determine and locks the corresponding blocks *within Simulink*, therefore, it is considered to be automatic operation).

Per claim 2:

MathWorks further discloses:

- setting the latch component initially to a third mode in which the latch component is prohibited from locking attributes of the signal, wherein in the third mode, a signal passes through the latch component to the second node regardless of the attributes of the signal(i.e. "If enabled, the *port outputs the value of its input at the previous time step* (page 9-149)," which explains that Latch input field traps the data (signal) path to maintain the data unchanged; The Latch component encloses signal attributes between ports in a triggered system, see page 9-1489-148; 9-149).

Per claim 3:

MathWorks further discloses:

- resetting the latch component from the second mode to the third mode (i.e. "Simulink control flow statement blocks allow you to retain or reset...the values of states for Action," 8-24; "Reset the state," 9-150; "Choose reset to cause the states," 8-5).

Per claim 4:

MathWorks further discloses:

- the latch component is placed on branches in a model of the system (i.e. Drawing a branch line section," 4-28).

Per claim 5:

MathWorks further discloses:

- the latch component automatically determines and locks at least one attribute of multiple signals (i.e. *Simulink* blocks can output one or two dimensional *signals*," see section Working with Signals, 4-32).

Per claim 6:

MathWorks further discloses:

- the latch component receives information from an application programming interface (API) of the design and execution software tool and automatically determines the at least one attribute of the signal based on the information received from the API of the design and execution software tool (i.e. "Simulink user interface," 4-32).

Per claim 7:

MathWorks further discloses:

- the design and execution software tool includes a time-based block diagram modeling and execution system (i.e. *Simulink to simulate…over a specified time span,"* 3-2).

Per claim 8:

MathWorks k further discloses:

- the design and execution software tool includes a state-based and flow diagram modeling and execution system (i.e. "Using Stateflow with the Control Flow Blocks," 8-24).

Per claim 9:

MathWorks further discloses:

- wherein the design and execution software tool includes a data flow diagram modeling and execution system (i.e. Simulink,3-2; Stateflow, 8-24).

Per claim 10:

MathWorks further discloses:

- wherein the design and execution software tool includes a software diagram modeling and execution system(i.e. Simulink,3-2; Stateflow, 8-24).

Per claim 11:

MathWorks further discloses:

- wherein the design and execution software tool includes a Unified Modeling Language (UML) diagram modeling and execution system (i.e. Stateflow, 8-24).

Per claim 12:

MathWorks further discloses:

- wherein one of the first node and the second node includes a polymorphic implementation of a subsystem(i.e. "The input port accepts data of mixed types," 9-115).

Per claims 13-16 and 20-22, they are another method versions of claims 1-6 and 12, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-6 and 12 above.

Per claim 17:

MathWorks further discloses:

- wherein the component includes a source port component that performs the function of linking outside the system into the system (i.e. "Inports are the links from outside a system into the system," 9-146).

Per claim 18:

MathWorks further discloses:

- wherein the component includes a destination port component that performs the function of linking the system into outside the system (i.e. "Outports are the links from a system to a destination outside the system," 9-196).

Per claim 19:

MathWorks further discloses:

- wherein the component includes a bidirectional port in which the signal flows into and out of the system (see For Iterator section, 9-115; Simulink, 3-2).

Per claims 23-26, they are the medium versions of claims 1-6, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-6 above.

Per claim 27:

MathWorks further discloses:

- providing match-criteria for selecting signals; determining signals that meet with the match criteria; and when a predetermined event occurs, automatically determining the signal attributes for the signals that meet the match criteria, wherein the attribute of the signal is locked to be prevented from changing when the design of the target system changes(i.e. *Latch input field*, "This field is enabled *only if the Inport block resides in a triggered subsystem.* If enabled, the port outputs the value of its input at the previous time step," page 9-149).

Per claim 28:

MathWorks k further discloses:

- inserting a component with means for storing the collected attributes of the signals when the signals meeting the match-criteria do not have means for storing (i.e. see Data Store Write section," 9-62).

Per claims 29-37, they are the system versions of claims 1-8,12 and 17-20, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-8,12 and 17-20 above.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 571-272-3724. The examiner can normally be reached on M-R 6:30-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MENG Al AN can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

IK
AU 2193

MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100